1.0 GENERAL

1.1 Introduction

The AMHS safety management objectives are to:

- ☑ Ensure the safety and health of passengers, employees and other persons affected by AMHS operations.
- ☑ Give due consideration to the protection and conservation of property and of the environment, particularly the marine environment.
- ☑ Comply with international, national and local laws, agreements and regulations which relate to health, safety and protection of the environment, and
- ☑ Ensure that commercial factors shall not take precedence over matters relating to health, safety and environmental protection.

☞ 🕮	AMHS's Safety & Environmental Policy (see SMS – Safety Management Manual)

To achieve these objectives the AMHS has adopted a safety management system that covers shore and ship operations.

This Manual forms an important part of the AMHS Safety Management System documentation. It provides the Master, Officers and crew with guidance on routine shipboard operations that have a potential effect on safety and the environment.

It is the responsibility of each crew member to use the equipment, facilities, procedures and training provided by the SMS to protect their own safety and the safety of others and to prevent harm to the environment.

☞ 🕮	International Safety Management (ISM) Code SMS – Safety Management Manual SMS – Occupational Health & Safety Manual

1.2 Authority of the Master

The Master has the overriding authority and responsibility for taking all necessary actions which affect:

- The safety of the ship, passengers and crew.
- Prevention of pollution.
- The efficient operation of the ship.
- The implementation of AMHS policies.

If the Master is incapacitated in any way, the senior Deck Officer assumes command.

The responsibilities and duties of the Master, Officers and crew are described by the Job Descriptions in the Essential Functions--Demands, Job Analysis issued by the AMHS.

☞ 🕮	International Safety Management (ISM) Code SMS – Safety Management Manual Class Specifications Essential Functions – Demands – Job Analysis

2.0 MAINTENANCE

2.1 General

Revised: 30Apr98

Maintenance of all types must be carried out in safe manner. The following must be considered when undertaking any maintenance:

- What systems will be affected during and after work is performed? Will the vessel's watertight integrity, communications, propulsion, maneuverability or general safety be compromised?
- At what time can the work best be accomplished?
- Are sufficient personnel, parts, materials, tools, and adequate time available and/or ready?
- Have appropriate personnel been notified of work to be done?
- Have the possible effects of such work been made to those impacted?
- What arrangements are required before work can proceed? Will critical systems be affected?
- Have all necessary systems, pumps, blowers, compressors, valves, circuits, etc. been properly secured/isolated?
- Have lock-out/tag-out procedures been carried out?
- Have hot work procedures been carried out and a Hot Work Checklist been completed?

Defects

Defects are usually identified in one of the following ways:

- Equipment failure
- Performance evaluation
- Regulatory inspections/tests
- Routine or preventive inspections/tests

Defect reporting methods vary. The method of initial defect reporting will vary with the nature (urgency and/or severity) of the defect.

Except for the most minor defects, defects and the corrective actions taken are noted in maintenance/repair records for the affected equipment or system. At present, such records are not kept the same way on all vessels. Efforts are underway to standardize such methods.

As with initial defect reporting, the action taken to correct a defect will generally vary with the nature of the defect.

The details of inspections and/or maintenance procedures required by regulatory agency(ies) are recorded by the agency(ies).

On-board records may often refer to a required inspection, test or maintenance procedure as a whole rather than to list all of the details.

Continued certification by regulatory agency(ies) is evidence of having met such requirements.

Work orders in the form of periodic maintenance lists are kept in the Engine Room as to the personnel expected to perform maintenance and for review by supervisory personnel. These WEEKLY, BI-WEEKLY, MONTHLY, QUARTERLY, SEMI-ANNUAL and ANNUAL checklists have columns for updating the most recent performance of each listed activity and may include space for personnel initials, for detail reference, if such is desired. Additional checklist style work logs are located throughout the ships, convenient to associated refrigeration compressors, fan rooms, battery banks or other site specific equipment. New forms for these work order/log/checklists are kept in the Engine Room filing system or can be generated from electronic files in the ship's computer. Applicable information from these work lists and logs is transferred to the maintenance manual for the official up-to-date maintenance/inspection record.

It is the responsibility of the First Assistant Engineer to ensure each item of scheduled maintenance is performed and checked off the lists, and to convey this information to the Chief Engineer for record keeping purposes. Specific items of maintenance will be assigned as the Chief Engineer and First Assistant Engineer determine, in consultation, but normal procedures are covered by referral to the individual job descriptions.

Each vessel lead Chief Engineer will maintain a maintenance manual which will include a maintenance schedule of upcoming major scheduled maintenance items.

Maintenance/Inspection work is recorded in a machinery history log specific to each vessel. A work log is also kept of day-to-day labor in progress to more easily pass information to the next watch or crew. Applicable information from the work logs is transferred to the maintenance schedule for the official up-to-date maintenance/inspection record.

Items of ship upkeep, modifications and maintenance requiring shoreside support are determined by the Port Engineer's and Port Captain's Offices in consultation with the Master and Chief Engineer. These maintenance items are requested by the Master and shipboard Department Heads via the AMHS Ship Maintenance Request form. Quarterly inspections generate items for further attention as well as an overview of the effectiveness of the present procedures.

Annually, the Port Engineer prepares a set of overhaul and repair specifications. Revised: 30Apr98
These items are done by an outside contractor, typically at the contractor's facility.

During each annual maintenance period, each vessel is assigned a Port Engineer to oversee the work accomplished by the contractor. Payment for any work item(s) either in whole or part shall be considered as acceptance of the progress of the work.

Maintenance Manual

The maintenance manual incorporates all maintenance requirements mandated by Class Society, (American Bureau of Shipping), Regulatory Bodies, (United States Coast Guard), and Operational Requirements, (Crew Maintenance).

The maintenance manual will utilize a flow chart format. The major groups will include, but not be limited to, Hull, Engineering Machinery, and Deck Machinery. Each major group may be sub grouped. All subgroups shall include a maintenance item list showing the Maintenance/Inspection schedule of all maintenance items.

The maintenance schedule shall list the maintenance **"Item", "Cycle",** and next **"Due Date"** with **"Comments"** if any.

When applicable the maintenance manual shall contain pertinent information regarding the location of technical information and spare parts that may be required to complete the item. In the case of electronic data storage, the appropriate files will be made available to relief personnel with brief access information.

Maintenance and Repair Requirements

The ship will be kept in seaworthy condition and in a state of operational readiness at all times. This is achieved by scheduled maintenance, non-scheduled corrective maintenance and prompt repair of unexpected equipment failure. All maintenance and repair should be carried out with minimum outside assistance.

Whenever any technical defects or mechanical failures occur that are beyond the ability or resources of vessel personnel the respective Department Heads notify the respective Port Engineer's or Port Captain's Office as soon as practicable. The Port Engineer's and Port Captain's offices will collectively schedule the logistics for shoreside support as necessary. Deficiencies of this nature are included in the weekly reports by the shoreside Department Heads.

The Chief Engineer has the responsibility for shipboard maintenance. However, it is the responsibility of all personnel to report immediately any faults which may affect the safety and performance of the ship or the crew.

Immobilization

The Master may allow the ship to be immobilized for maintenance to important machinery or equipment under the following circumstances:

- Any situation that creates imminent danger to the vessel, crew or passengers.
- The safety of the ship is not compromised by being immobilized.
- The safety of the ship may be compromised by getting underway.

Class Society Surveys/ABS

To maintain notation of ship's hull and major machinery items the vessel is subject to periodic survey by American Bureau of Shipping surveyors. Each survey group that comprises the Hull and Machinery Survey is incorporated into the maintenance manual and included in the maintenance/inspection schedule. Item inspections are completed and credited in accordance with ABS guidelines every five years. The class survey status report for each vessel is provided to the Port Captain's Office by the Class Society. Copies of the respective status reports are subsequently provided to the vessel Masters via the Port Captain's Office.

Any deficiencies or outstanding survey comments arising from these surveys must be logged in an appropriate section of the maintenance manual and reported to the Port Engineer's and Port Captain's office via the weekly report stating:

- The deficiency.
- The cause (if known).
- Any corrective action taken or planned.

☞ 🕮 SMS – Procedures Manual - - SMP/05 Corrective Action

The Chief Engineer and the vessel's respectively assigned Port Engineer work collectively to ensure that survey inspection items are made available as appropriate to comply with Classification Society rules. The Chief Engineer and the Port Engineer work collectively to implement corrective action regarding any survey deficiencies.

The Chief Engineer shall maintain and update the Class Survey items as appropriate in the maintenance manual's maintenance schedule. The machinery manufacturer's maintenance recommendations will be utilized as a guide for scheduled maintenance planning unless directed otherwise by the Port Engineer's Office.

The Chief Engineer must record the machinery running hours and, in conjunction with the Machinery Survey items, ensure that the established maintenance schedule is being followed. Any deviation from the maintenance schedule must have prior authorization from the Port Engineer's Office.

Engineer on Watch

When maintenance is in progress, the Engineer on Watch is to cooperate with the Engineer in charge of the maintenance by:

- Isolating and bypassing machinery to be worked on.
- Adjusting remaining plant to function adequately and safely during the maintenance period.
- Correctly recording, as appropriate, information for the oncoming Watch, including but not limited to the following:
  - The equipment being worked on.
  - Details of personnel involved.
  - The safety measures that have been implemented.
  - The testing and return to service, if appropriate, of any repaired machinery or equipment.

The Engineer on Watch is to ensure that competent maintenance personnel are available to provide assistance in the event of automatic equipment failure.

The engineer in charge of maintenance projects pertaining in particular to hot work, enclosed space entry, electrical work and auto start machinery is responsible for adhering to the proper safety procedures.

Hot Work Procedure

Hot work will not be allowed in or adjacent to areas that contain combustible materials without first being certified safe for hot work by a certified marine chemist or competent person. Hot work in other areas will be performed under the supervision of the Chief Engineer utilizing required additional personnel competent to perform a fire watch. Portable fire extinguishing medium will be readily available during hot work procedures. The Hot Work Checklist is to be used.

Enclosed Space Entry

When the vessel is in service and the necessity arises to enter enclosed spaces, the following procedures will be observed.

The Chief Engineer is responsible for providing fresh air ventilation and ensuring sufficient oxygen is present to support human life. In the absence of atmosphere testing means, SCBA use when entering enclosed spaces is mandatory.

Entry into enclosed spaces will be affected by two or more persons. Additional personnel will be assigned to standby outside the enclosed space to monitor the progress of work within the space. The Engineer in Charge of the work is responsible for ensuring that all personnel have exited the enclosed space prior to securing any entry openings.

Prior to commencing any enclosed space entry the Master will be consulted and advised. The Enclosed Space Entry Checklist is to be used.

Lock-out/Tag-out Procedure

Prior to the start of any work on electrical or auto-start equipment, the equipment will be secured at the nearest breaker or junction box as applicable. A *lock-out tag* shall be securely fastened to the appropriate lock-out location by the engineer in charge of the work.

The lock-out tag shall indicate the equipment being worked on and the engineer in charge of the work. The engineer in charge shall also provide a duplicate tag to the Engineer on Watch. Upon completion of work the engineer in charge of the work shall remove the tag from the lock-out location and deliver it to the Engineer on Watch. The Engineer on Watch will then dispose of both lock-out tags and the equipment returned to service upon successful testing, if applicable.

2.2 Hull and Deck Equipment

Each vessel's hull and superstructure are maintained as required for vessel seaworthiness during vessel operation by the Deck Department under the supervision of the Chief Mate. Checks and inspections are carried out as needed by the Master, Chief Mate and Chief Engineer. Yearly maintenance during the vessel's annual maintenance period is determined by the Port Engineer's and Port Captain's office collectively with the Master and Chief Engineer. Revised: 30Apr98

Periodic ultrasonic testing of the hull, decks, keel plate, transverse bulkheads and suspect areas is accomplished every five years as per the ABS Class Survey rules. Suspect areas are accomplished on an as needed basis. The survey gauging reports are maintained in the Chief Engineer's maintenance records. The hull gauging survey and the hull general survey items are listed in the maintenance manual's maintenance/inspection schedule. Revised: 30Apr98

Interior spaces are inspected weekly by the appropriate Department Head and the Master or his designee. Cleaning of public areas is carried out by the Steward's Department under the supervision of the Chief Steward and the Deck Department under the supervision of the Chief Mate. Cleaning of machinery and associated spaces is done by the Engine Department under the supervision of the Chief Engineer. Maintenance of machinery, electrical systems, piping systems and steelwork is performed by the Engine Department under the supervision of the Chief Engineer.

Hull and Deck Equipment are maintained to satisfactory operational standards mandated by ABS Class Society and USCG regulatory inspections and are subject to their periodic repetitive inspection schedules. Vital hull and deck equipment items are included in the maintenance manual's maintenance/inspection schedule.

- The Chief Engineer is responsible for inspection, cleaning and maintenance of tanks and holds. Inspection schedules are mandated by the ABS Class Society and the USCG annual requirements for the Certificate of Inspection. All applicable items are included in the maintenance manual's maintenance/inspection schedule. The Chief Engineer works collectively with the Port Engineer to schedule inspections and establish the scope of any maintenance and repair work that may be required during the vessel's annual maintenance/out-of-service period.

- The Chief Engineer is responsible for maintenance of the following:

  - Void spaces.

  - Pipelines and valves.

  - Ducting.

  - Machinery portions of mooring equipment, including cables, chains, ropes, winches, windlasses and fairleads. The Engine Department provides mechanical assistance to the Deck Department as needed for other aspects of maintenance.

  - Machinery portions of accommodation ladders, ladder winches, gangplanks and pilots' ladders. The Engine Department provides mechanical assistance to the Deck Department as needed for other aspects of maintenance.

  - Machinery portions of vehicle loading/lifting equipment, vehicle deck doors and ramps. The Engine Department provides mechanical assistance to the Deck Department as needed for other aspects of maintenance.

  - Under direction of the Chief Engineer, the Engine Department provides mechanical assistance to the Deck Department as needed for maintenance of hatch covers, w/t doors, ports, etc.

The Chief Mate, under the supervision of the Master, is responsible for operational inspection and maintenance of the following:

- Mooring equipment, including cables, chains, ropes. The Engine Department provides mechanical assistance to the Deck Department as needed for maintenance.

- Accommodation ladders, ladder winches gangplanks and pilot's ladders. The Engine Department provides mechanical assistance to the Deck Department as needed for maintenance.

- Loading/lifting equipment, vehicle deck doors and ramps. The Engine Department provides mechanical assistance to the Deck Department as needed for maintenance.

2.3 Machinery

Machinery maintenance and inspection is accomplished according to classification society rules and machinery manufacturers' recommendations. Machinery manufacturers' recommendations are used as guidelines for establishing maintenance and inspection cycles.

The established maintenance and inspection cycles are performed in conjunction with the ABS rules and all applicable items are included in the maintenance manual's inspection/maintenance schedule and executed accordingly.

Stand-By / Off-Line Machinery

Any machinery item not being utilized for the immediate operation of the vessel is considered temporary stand-by or off-line machinery. During the course of vessel operations all off-line machinery is eventually utilized as on-line machinery by replacing existing operating machinery. This machinery is included in the maintenance manual's maintenance schedule. All maintenance/inspection work is accomplished according to the established maintenance schedule cycle.

Main Engines

The main engines are included in the Class Survey as a Survey Group and are on a continuous survey cycle with items within the Group being inspected as per Class guidelines once every five years. Planned maintenance is conducted utilizing the manufacturers' recommendations as guidelines with individual inspection items being included in the maintenance manual's maintenance schedule.

Pitch System

The pitch systems are included in the Class Survey as a Survey Group and are on a continuous survey cycle with items within the Group being inspected and tested as per Class guidelines once every five years. Planned maintenance is conducted utilizing the manufacturers' recommendations with specific inspection items being included in the maintenance manual's maintenance schedule. Repairs are implemented as necessary from inspection and mandated by attending Class Surveyors.

Controls: Main Engine & Pitch

The main engine and pitch control systems are tested daily. Planned maintenance on the control systems is conducted utilizing the manufacturers' maintenance recommendations as guidelines. Specific portions or items of the control systems are included in the maintenance manual's maintenance schedule.

Steering

The steering system is operated, tested and inspected on a daily basis by the Engineering Department when the vessel is in operational status.

Generators (Main & Emergency)

Revised: 30Apr98

The ships' main generators are opened for inspection and cleaning by the Engineering Department on an annual basis or more frequently as may be deemed necessary by the Chief Engineer or Port Engineer.

Manufacturers' maintenance recommendations are utilized as guidelines for planned maintenance. The generators are included in the classification society's continuous machinery survey and specific items are inspected every five years. The specific items are listed in the maintenance manual's maintenance schedule.

The emergency generator shall be run under load for at least two hours a month.

Reduction Gears

The ships' reduction gears are opened for inspection by the Engineering Department on an annual basis or more frequently as may be deemed necessary by the Chief Engineer or Port Engineer. Manufacturers' maintenance recommendations are utilized as guidelines for planned maintenance.

The reduction gears are included in the classification society's continuous machinery survey and specific items are inspected every five years. The specific items are listed in the maintenance manual's maintenance schedule.

Fire & Sprinkler Pumps

Revised: 30Apr98

The ships' fire pumps are included in the classification society's continuous machinery survey and are opened for inspection once every five years and are operationally tested twice each month during the weekly fire and boat drills.

Each fire pump is operationally tested weekly during the weekly fire and boat drills. The accommodation sprinkler pump is to have a no-flow test each week.

The pump's inspection date is listed in the maintenance manual's maintenance schedule.

The operational tests are logged in the Bridge Log Book.

Contractor Reports

Service and maintenance reports generated by contractors are provided to the Port Engineer's office and subsequently copies are provided to the Master or Chief Engineer as appropriate.

Copies of the service/maintenance reports are maintained in the respective Chief Engineer's or Chief Mate's files.

2.4 Navigation and Communication Equipment

The Second Officer, under the supervision of the Master, will perform routine maintenance and calibration of all navigation and communication equipment.

When shoreside technicians are needed for repairs or maintenance while a vessel is in service, they are requested by the Master through the Port Captain's office. The initial request should be made via the most expeditious means available (telephone, fax or e-mail), and followed up by a Stock Request form. When the ship is in service and electronic equipment repair or maintenance is performed by shoreside technicians, a record of this will be made in the Bridge Log Book. Annual maintenance and servicing is requested by the vessel Master via Stock Request or Ship's Maintenance Request forms through the Port Captain's office. Records of repairs, service and maintenance in the form of shoreside vendor invoices and/or notated Stock Request or SMR forms will be kept on board each vessel for at least one year and until the next maintenance cycle is completed.

Manufacturers' equipment manuals are kept on board each vessel. They are to be consulted regarding all maintenance, calibration or adjustments.

Radars

AMHS vessels are equipped with various models of DECCA radar systems. Routine maintenance consists of cleaning the external surfaces of each unit and cleaning of external and internal air filters. Air filters are checked and cleaned monthly and a record of this cleaning maintained on the Bridge of each vessel. All radar repairs and internal maintenance must be performed by a licensed technician.

Radars are maintained and serviced by shoreside technicians annually during each vessel's maintenance period. Records of radar repairs and service, consisting of the shoreside technician's invoice and entries into the Radar Log, are maintained on board each vessel.

Gyro

AMHS vessels are equipped with Sperry Mark 37 gyro units. These are sealed units and all internal maintenance and servicing must be performed by a licensed technician. Gyros are checked and serviced annually during the vessel's annual maintenance period. Records of this service are maintained on board each vessel in the form of vendor invoices. Gyro speed and latitude adjustments are made as necessary by the Second Officer or the Master. Any adjustments of the gyro on its mounting base must have the Master's approval.

Magnetic Compass

Magnetic compasses are swung and adjusted by a professional compass adjuster during each vessel's annual maintenance period. The adjuster compiles a compass deviation table which is posted in the wheelhouse.

Depth Sounder

AMHS vessels are equipped with various types of echo sounders. Most do not require regular maintenance and must be repaired or calibrated by a technician. Older types require some maintenance which is performed according to the manufacturer's instructions maintained on board each vessel.

GPS – Loran C

AMHS vessels are equipped with Trimble GPS units. Some AMHS vessels are equipped with Furuno Loran-C units. Calibration of these units is performed by shoreside technicians on an as-needed basis. Records of shoreside servicing are maintained on board in the form of vendor invoices.

Communications Equipment

AMHS vessels are equipped with SSB and VHF radios, SIMRAD and NAVTEX receivers, cellular telephones and hand-held VHF radios.

Daily equipment checks of all Bridge radios and receivers are carried out by the Second Officer and recorded in the Radio Log Book maintained on the Bridge.

Bridge radios and receivers are checked and calibrated by a licensed technician during each vessel's annual maintenance period.

Records of this servicing are maintained on board in the form of vendor invoices.

2.5 Fire-fighting and Lifesaving Equipment

The Chief Mate is responsible for ensuring routine inspections, tests and maintenance of fire-fighting and lifesaving (emergency) equipment are carried out. All emergency equipment will be checked and inspected on a weekly basis and records of this maintained on board in the form of checklists or logs. The Chief Engineer is responsible for maintaining each vessel's fire pumps and fire main system, sprinkler systems, lifeboat davit winches and lifeboat engines. Repairs or maintenance and servicing done by shoreside vendors to comply with regulations are requested by the Master or Chief Mate via Stock Request or Ship's Maintenance Request form through the Port Captain's Office. Records of annual maintenance and servicing will be maintained on board in the form of vendor invoices and certificates and/or notated Stock Request or SMR forms for at least one year and until the next maintenance cycle is completed.

All emergency equipment will be maintained to regulatory and manufacturers' requirements. Manufacturers' equipment manuals are maintained on board each vessel for reference and guidance.

☞ 🕮	46 CFR 71.25 46 CFR 78.17-80 46 CFR 199.45 46 CFR 199.190 SOLAS

Fire Pump & Fire Main System

The fire pump will be operated and the fire system pressurized weekly. A record of this will be entered into the Bridge Log Book. The Chief Mate is responsible for ensuring that the fire main system is drained properly during periods of freezing weather.

Fixed Fire-Fighting System

AMHS vessels are equipped with the following fixed systems:

- Car Deck sprinkler systems – both manual and pressurized types.
- Pressurized accommodation space sprinkler systems (SOLAS vessels only).
- Machinery space and Paint Locker Carbon Dioxide or Halon flooding systems.
- Galley Dry Chemical extinguishing systems.

All fixed systems are serviced by shoreside technicians during the vessel's annual maintenance period. Car Deck sprinkler systems are tested annually, or more frequently, by the ship's crew.

Portable Fire Extinguishers

All fire extinguishers are checked weekly as to their location and condition. Extinguishers are checked and serviced by shoreside vendors annually during the ship's annual maintenance period. Each extinguisher has attached a tag showing the last service date and the service vendor.

SCBA and Fire Suits

SCBA and fire suits, along with all other equipment contained in Emergency Gear Lockers, are inspected weekly. SCBA repairs must be performed by the manufacturer. All Emergency Squad personnel assigned an SCBA and fire suit are responsible for checking their assigned equipment as soon as possible after joining the vessel.

Fire Detection Equipment

AMHS vessels are equipped with various types of fire detection systems. These systems must be tested and maintained in accordance with the manufacturers' instructions maintained on board each vessel. In all cases, fire detection units will be tested at least annually. The Chief Mate is responsible for ensuring these tests are carried out and test records maintained on board each vessel.

Lifeboats, Rescue Boats and Davits

Lifeboat and rescue boat engines will be operated weekly by the ship's engineers and this fact recorded in the Bridge Log Book. Lifeboat and rescue boat fuel is changed annually and records of this kept by the Chief Engineer. Davit lubrication is carried out by the ship's engineers. The Chief Engineer will maintain records of this maintenance. Davit falls are lubricated annually, end-for-ended at thirty month intervals and replaced every five years. The Chief Mate is responsible for ensuring this maintenance is carried out. Records of this maintenance, along with Wire Rope Certificates, will be maintained by the Chief Mate.

Life Rafts and Evacuation Systems

Life rafts and evacuation systems are serviced by certified shoreside vendors during each vessel's annual maintenance period. Life raft certificates are maintained on board by the Master.

Personal Flotation Devices

Lifejackets are inspected individually each year during the vessel's annual maintenance period. Lifejacket storage areas and their contents are checked and inspected weekly.

2.6 Dry-docking

Added: 30Apr98

The Port Engineer has a standard specification to be used for the annual dry-docking and associated maintenance shipyard work.

The ship's Master, Chief Engineer, and assigned Project Manager/Resident Engineer will determine along with the Port Engineer what required and optional work items will be included in the specification.

This specification will be sent to the shipyard(s) for price proposal.

Upon receipt, review, and acceptance of the shipyard bids, a contractor shall be signed the work.

AMHS shall deliver and turn over the vessel to the contractor.

The contractor is responsible for the stability of the vessel during docking and undocking. The Port Engineer or his designee shall confirm that the Contractor has made adequate provisions and calculations (as required by the standard dry-docking specifications) for the vessel's stability during docking/undocking.

All contract items will be discussed with the Contractor prior to start of work; there will be a clear understanding of the scope of work by both the Contractor and AMHS before the start of any work.

Any change orders will be accomplished only after there is a definite scope of work agreed to by both parties in writing.

Any deficiencies or unusual situations will be presented to AMHS in a written Condition Found Report (CFR) that will be signed as accepted by a representative of AMHS. The CFR will address the condition and make a specific recommendation for repairs by the Contractor and be approved or denied by AMHS.

Any work beyond the scope of the specification will be performed only after receiving written approval in the form of a Change Order from AMHS. All change orders will be directed by the Port Engineer or the assigned Project Manager/Resident Engineer.

Payment for any work item(s), either in whole or part, shall be considered as acceptance of the progress of the work item(s).

2.7 Short Term Lay-up

Added: 30Apr98

Select AMHS vessels are in lay-up temporarily each year for several months during the off peak season. When a vessel is laid up the following shall be accomplished:

- Prior to lay-up the Port Engineer's and Port Captain's offices shall:
  - ☑ Obtain berthing agreement
  - ☑ Assign skeleton crew and set up schedule.
  - ☑ Notify local USCG and fire department of intent.
  - ☑ Make arrangements to off load equipment and supplies.
- When the vessel arrives at the lay-up berth the crew shall:
  - ☑ Tie up and moor the ship.
  - ☑ Sound all tanks and voids.
  - ☑ Secure weather opening, exhausts, over boards, and sea chests not in use.
  - ☑ Hook up shoreside services including but not limited to:
    - ⇨ Water pressure to ship's fire main system
    - ⇨ Sewage
    - ⇨ Shore Power
    - ⇨ Phone lines (Purser's Counter, Chief Engineers and Captain's staterooms.
    - ⇨ Water
    - ⇨ Steam
  - ☑ Prepare boilers in accordance with manufacturer's recommendations.
  - ☑ Post emergency phone numbers at the phone stations.
  - ☑ Conduct a walk through with the local fire department.

- During lay up the skeleton crew shall:
  - ☑ Perform routine maintenance s directed by the Port Engineer and Port Captain.
  - ☑ Sound tanks and voids once a month.
  - ☑ Maintain fire-fighting equipment in a ready state.
  - ☑ Maintain keep warm systems for reduction gears, main engines, and generators.
  - ☑ Rotate machinery as required.
  - ☑ Check and maintain moorings as needed.
  - ☑ If watch mates are assigned to the vessel, hourly rounds through machinery spaces and every other hour through other spaces at night and on weekends.
  - ☑ Maintain and monitor operating liquids.
  - ☑ Maintain vessel at a temperature above freezing.
  - ☑ Maintain SMS documentation and follow applicable reporting requirements.

When the vessel is ready to be placed back into service the following shall be accomplished:

- Vessel to notify the local USCG and fire department.
- Prepare all equipment for operation following normal start up procedures. Check all fluid levels and sound tanks and voids before leaving port.

Prior to sailing the officers shall conduct shipboard familiarization and training.

3.0 ROUTINE COMMUNICATIONS

3.1 General

AMHS vessels are equipped with VHF and SSB radios and cellular telephones for communication with shoreside personnel while underway.

Terminals are equipped with e-mail and fax capabilities for loading manifests and passenger lists. Most terminals have telephone land line connections for vessels while in port.

Telephone communication between office and Terminals is normal for casual information as is VHF radio, VHF Marine Operator assisted phone calls, and cellular telephone for communication with the vessels. Telephone communications, either land line or cellular, are preferred if possible for sensitive information.

A list of phone numbers for key personnel, the AMHS Directory of Key Personnel, is available on board each vessel. Emergency contacts are also listed in the AMHS SOPEP on board each vessel and the Port Information Booklet.

Emergency Communications

Emergency communications procedures are described in the Ship Emergency Manual.

☞ 🕮	SMS – Ship Emergency Manual Ship Emergency Checklist & Forms Manual

3.2 Ship Reporting

Revised: 30Apr98

The Master will ensure that all reports required by Regulation, ports, port states and AMHS are made on time and are accurate and concise.

- Status reports are made via telephone to the Port Captain's office when a vessel is two or more hours behind printed schedule.
- Arrival Reports are made via VHF radio.
- Departure Reports are made by the appropriate terminal via e-mail to all shore terminals.

- **Master's Weekly Report** is to made via Inter-Office Memo to the Port Captain. The following items should be included: Revised: 27Aug02

  - Drills & inspections carried out during the week
  - Training conducted
  - Crew lists
  - SMS review/comments
  - Changes in crew during the week
  - Bunkering conducted during the week
  - Unusual incidents, involving crew or passengers
  - Accidents involving crew, passengers, or equipment
  - Equipment failures or malfunctions
  - Passenger and vehicle traffic summaries
  - Weather encountered during the week
  - Sanitary condition of the ship
  - Bridge Log Book copies (for the last week)

- **Chief Engineer's Weekly Report:** Revised: 27Aug02

  - This weekly report, and all attachments will be submitted per AMHS Marine Engineering's Procedure # 001, and any other applicable direction or guidance.
  - The following associated documents shall be included with this weekly report, and may not be limited to:
    - Fluid levels and consumption
    - Main propulsion and auxiliary machinery hours
    - Machinery or Equipment malfunctions, breakdowns, and any unusual incidents, as well as action(s) taken to adequately address.
  - The original and all attachments shall be submitted to the assigned Port Engineer and the Juneau Port Engineer's Office for Records Retention.
  - A copy of the Weekly Narrative shall be submitted to the vessel Master for inclusion in their weekly report.
  - A copy of the weekly soundings of tanks and voids will be given to the Master for inclusion in their Weekly Report.
  -

- **Chief Purser's Weekly Report:** Revised: 27Aug02

  - This weekly report, and all attachments will be submitted per direction from the Port Steward. See checklist issued by Port Steward for what is to be attached.
  - The Weekly report's Narrative shall be in the memorandum format issued by the Port Steward's Office
  - The original and all attachments shall be submitted to the Port Steward's Office.
  - A copy of the Narrative shall be submitted to the vessel Master for inclusion in their weekly report.

❍ **Chief Steward's Weekly Report:** Revised: 27Aug02

- This weekly report, and all attachments will be submitted per direction from the Port Steward. See checklist issued by Port Steward for what is to be attached.
- The Weekly report's Narrative shall be in the memorandum format issued by the Port Steward's Office
- The original and all attachments shall be submitted to the Port Steward's Office.
- A copy of the Narrative shall be submitted to the vessel Master for inclusion in their weekly report.

3.3 Radio Procedures

The Master must ensure that a radio watch is maintained in accordance with FCC regulations. A radio log must be maintained in accordance with regulations and retained on board for one year. The Master must ensure that the correct radio procedures are used at all times.

On ships operating under the Global Maritime Distress and Safety System (GMDSS), Officers who hold a GMDSS certificate must become fully conversant with the equipment to be operated.

☞ 🕮	47 CFR 80.1073 47 CFR 80.409 33 CFR 25.05 33 CFR 26 33 CFR 26.04 STCW Convention & Code(s)

3.4 Internal Communications

Shipboard Internal Communications methods consist of internal phone systems, hand-held VHF radios, public address system, and posted notices.

Ship's phone systems consist of sound powered and/or electrical phone systems and are used for the following:

- ❍ Ship's business between all Departments
- ❍ Bridge-Engine Room communications which have priority on sound powered phone circuits

Hand -held VHF radios are used for the following:

- Cargo Operations
- Bunkering Operations
- Security communications, including Watchman-Bridge communications
- Ship - Terminal communications while in port

The Watch Officers are responsible for ensuring that hand-held radio batteries are charged and ready for use. Individuals in possession of assigned hand-held radios are responsible for ensuring the battery is charged.

The ship's Public Address System has terminals on the Bridge, at the Purser's Counter, and on the Car Deck. It is used for the following:

- General communication to passengers
- General announcements to crew
- Pre-recorded SOLAS announcement made to the passengers after each departure

Posted notices and bulletin boards are at various public and crew locations throughout each ship. The following information is disseminated at these locations:

- Passenger safety instructions and information
- Customs and Immigration information
- General ship's information, including ship's layout, schedule, notices, and warnings
- General information and notices for the crew

Routine Passenger Safety Instructions

Passengers are informed of emergency signals, mustering areas, lifejacket locations and donning instructions, evacuation procedures, and other essential safety information by some or all of the following means:

- SOLAS announcement made after each departure on the public address system.
- Written notices and instructions in public spaces.
- Written notices and instructions in each stateroom.
- Videos shown in the ship's theater.

☞ 🕮	SOLAS

4.0 ADMINISTRATION

4.1 Official Books and Records

General

All entries in the logbooks and logs on board must be completed in English by the responsible person.

No erasures are to be made in any log books. If an error is made, draw a single line through the error, write the correct entry above or below it and initial the change.

Bridge Log Book

The Bridge Log Book shall be kept for every day when the vessel is in operational status in port and for every watch when at sea. The only exception is extended lay-up with no AMHS personnel assigned to the vessel.

The Officer of the Watch is responsible for the upkeep of entries in the Bridge Log Book. During a voyage, Bridge Log Book entries are to be made by the Officer of the Watch and countersigned each day by the Master.

The Master's countersignature confirm that the facts recorded in the Bridge Log Book are true and accurate. Entries must be made according to the instructions at the front of the log book and/or with the flag state requirements.

At each departure entries regarding the following will be made in the Bridge Log Book by the Officer of the Watch:

- Ship's draft after loading.
- Compliance with applicable stability requirements.
- Times of vehicle deck door openings and closings.
- Number of passengers on board.

Entries regarding the following will be made in the Bridge Log Book weekly or as required by regulation:

- On board training and drills.
- Watertight door operation.
- Loudspeaker system tests.
- Emergency power and lighting system tests.
- Steering, whistle, and communications tests.

The above entries are made in addition to standard entries concerning operations, navigation, and emergency situations.

Completed Bridge Log Book copies are to be included with the Master's Weekly report.

☞ 🕮	46 CFR 78.37-5

Engine Log Book

The Engine Log Book shall be kept for every day when in service and for every watch when at sea. Before going off duty the Watchkeeping Engineer must ensure the following are recorded:

- ✍ Occurrences during the Watch relating to the main and auxiliary machinery.
- ✍ The operating conditions of main and auxiliary machinery during the watch.
- ✍ Consumption of FW, FO, LO and other oils and consumables.
- ✍ The time Engine Room placed on Stand-By
- ✍ The time of starting the engine(s).
- ✍ The time Bridge control is accepted (where applicable).

The Chief Engineer is responsible for ensuring the Engine Log Book is maintained. The log book is to be available for inspection and countersignature by the Chief Engineer each day.

Completed pages from the Engine Log Book are forwarded monthly to the Port Engineer.

Standing Orders

All Officers on AMHS ships must read the AMHS Standing Orders and sign as having understood them.

The Master's Standing Orders, which modify as necessary the AMHS Standing Orders, must be posted on the Bridge.

The Chief Engineer's Standing Orders, which modify as necessary the AMHS Standing Orders, must be posted in the Engine Room.

☞ 🕮	SMS – Safety Management Manual

Night Order Book (Bridge)

A Night Order Book may be kept on the Bridge where the Master may give orders/instructions for the night and/or other periods of the day when the Master will not be available on the Bridge.

All orders given in the Night Order Book must be signed by the Master. All Officers of the Watch must sign the orders to indicate that they have understood them.

Medical Log Book

A Medical Log Book shall be maintained by the Chief Purser. Each case of illness or injury and the corresponding treatment given must be entered in the book in addition to reporting to the AMHS and any statutory reports to external agencies.

Every entry must be signed by the Chief Purser. The Master shall countersign the Medical Log Book weekly.

Radio Log Book

The Watch Officers are responsible for maintaining the Radio Log Book. The Radio Log Book must be kept on the Bridge.

Loading Condition and Trim & Stability Book

The ship must comply with the minimum statutory standards of stability. The stability of the ship is also dependent on the security of exposed openings and the correct functioning of any automatic closing appliances.

Records of typical voyage conditions should be filed for reference.

☞ 🕮	Chapter 6 of this Manual 46 CFR 78.17-22 Trim & Stability Book

Certificates

Ship's Certificate of Inspection and SOLAS certificates, (if applicable), are posted in the main lobby in the vicinity of the Purser's Counter.

An index of certificates is maintained in the Master's office. Certificate details and expiration dates are maintained by the Port Captain's and Port Engineer's offices along with the vessel's Master.

Classification Society Documents

ABS documents, such as survey reports, declarations, quarterly listings etc., are kept in both the Master's and Chief Engineer's offices. The ABS classification certificates are posted.

4.2 Technical Documentation

Technical Records and Reports

Copies of technical reports and records should remain on board for reference purposes.

- Kept by the Chief Engineer, generally in his office are:
  - Technical reports and records dealing with Engineering or machinery.
  - Blueprints, drawings, manufacturer's instructions and other publications relating to shipboard equipment.
  - Blueprints and drawings for the entire vessel.
- Kept by the Chief Mate, generally in his office are:
  - Records and documentation, or copies of documentation, for items relating more specifically to the Deck Department.

Instruction Manuals for On Board Equipment

Mandatory manuals, required by national and international regulations, and other operational and instructional manuals, are also kept on board for crew reference when required.

☞ 🕮	SMS – Safety Management Manual

It is the Chief Engineer's responsibility to maintain on-board documentation of the ship's drawings and blueprints of the vessel, machinery, and systems. The Chief Engineer will also keep a record of drawings or publications removed during maintenance and repair periods.

4.3 Document Control

Document control procedures are used to ensure that relevant SMS documentation is at the correct issue, identifiable and that:

- Valid documentation is distributed and available where required.
- Changes are reviewed and approved only by authorized persons.
- Obsolete and invalid documentation is withdrawn for archive or destruction.

Revisions to documents are forwarded to the ship with instructions for incorporation. Revised sections/pages must be inserted in the relevant documents without delay and their content brought to the attention of appropriate ship's personnel.

Obsolete information must be removed, identified as superseded and archived or destroyed in accordance with Company instruction.

☞ 🕮 SMS – Procedures Manual - - SMP/02 – Document & Data Control

4.4 Passengers

Routine Employee and Passenger Relations.

Dress code for Officers and crew is contained in AMHS Policy and Procedures Manuals and in the applicable Union Contracts.

Crew conduct both on and off duty shall be in accordance with AMHS Policy and Procedures Manuals.

Public visitation of AMHS vessels is restricted to those individuals having business or family members on board. Visitors on board AMHS vessels should be directed or accompanied by a crew member as appropriate.

Employee's family members holding valid passes under the conditions stipulated in the applicable Union Contract are allowed to travel on board AMHS vessels as passengers according to AMHS policy and procedures.

Vessel Public and Crew Areas

Public areas on all vessels are clearly marked as such and available at all times for public access. If necessary to temporarily restrict access for cleaning or maintenance warning signs will be clearly posted at entrances to the affected space.

Crew only areas are clearly marked by posted notices on all entrances. Crew only areas are checked as such by the Watchman on their regularly scheduled rounds.

Public access to the Bridge and Engine Room is restricted. Notices to this effect are posted outside these spaces and also in conspicuous locations in the public spaces.
Public access to the vehicle deck is restricted to times when the vessel is in port or when accompanied by a crew member. Notices to this effect are posted at all vehicle deck access points. Vehicle deck access stairways are roped off after each departure. On longer voyages passengers are afforded vehicle deck access, for the purposes of pet care and access to personal items in their vehicles, at the discretion of the Chief Purser in consultation with the Officer of the Watch. These access times are to be scheduled in advance and announced by the Purser. During all vehicle deck access times the Watchman will be present on the vehicle deck and ensure all passengers have vacated the space at the end of the access period. On vessel arrivals public access to the vehicle deck is not permitted until the vessel is secure at its berth. All passengers must be off the vehicle deck before a vessel departs its berth.

☞ 🕮	SOLAS 46 CFR 78.10-1 and 78.40

Passenger Elevators

Written operation instructions and warnings are posted inside each vessel passenger elevator. During periods of heavy weather passenger elevators are to be secured. All vessel passenger elevators are inspected by the contractor and certificates are issued by Alaska Department of Labor, Mechanical Inspections and Certifications Divisions annually. Certificates of Inspection are posted inside each elevator.

4.5 Bunkering

Revised: 30Apr98

Fuel is supplied by various venders throughout the ports serviced by the AMHS fleet. Scheduling is arranged by the Chief Engineer to satisfy the requirements of safe operation and reserve as determined by the Master. The Chief Engineer will inform the Mate of time and duration of bunkering to avoid conflict with loading.

Fuel orders are generally placed by phone to the contracted vendor each week.

Particular procedures followed by each vessel will vary slightly, due differences in vessel design and operating situation. Those particulars are addressed in the bunkering manual.

☞ 🕮	AMHS's Fleet Bunkering Manual SMS – Ship Operations Manual, Part 5.9

Safety Margins of fuel quantity vary depending upon the operating schedule of the vessel.

4.6 Spare Parts and Stores

The following guidelines are provided for ordering spare parts and stores.

- As required and to maintain a spares inventory, Department Heads submits a stock request to the Juneau Central Office (JCO).
- The Chief Engineer orders spare parts for the Engine Department. Department Heads, often consulting with the Chief Engineer, order spare parts for their respective departments.
- Department Heads are responsible for the checking in of spare parts. Generally, much of the actual checking in is delegated to lower departmental personnel.

- Spare parts, stores, supplies, receipts and discrepancies are dealt with by the respective Department Head, the Supply office and, when necessary, the vendor.

- When lube oil is needed the Chief Engineer orders same from the contracted vendor by calling ahead.

- Lube oil samples are taken by the 1st Asst. Engineer, or designee, as per maintenance schedule and sent to contracted laboratory.

- Ship's stores are ordered by Department Heads submitting stock request(s).

- Department Heads are responsible for the checking in of stores and supplies. Generally, much of the actual checking-in is delegated to lower departmental personnel.

- Department Heads, primarily the Chief Engineer, secondly the Mate are responsible for anticipating the need of and acquiring spares and stores. In the case of an emergency situation which requires supplies or stores beyond those on board, several means are available.

    - Notify the Port Captain and/or Port Engineer who will in turn procure through the supply office, the warehouse or other vessels.
    - Field purchases can be made using Field Purchase Orders and petty cash.

4.7 Inspections

General

Regular sanitary inspections will be carried out by the Master and Department Heads. These inspections are carried out to ensure that the ship is in an orderly and sanitary condition and that equipment is in good working order.

Personnel involved in inspections must:

- ☑ Wear the appropriate personal protective equipment.
- ☑ Not inspect exposed areas in heavy weather.
- ☑ Inform the Officer of the Watch before inspecting isolated or exposed areas.

☞ 🕮 SMS – Occupational Health & Safety Manual
46 CFR 78.17-25

Galley and food preparation areas must be inspected to ensure:

- ☑ Personnel are carrying out their duties in accordance with instructions.
- ☑ All equipment is in a safe operating condition.
- ☑ Food handling and preparation procedures are carried out hygienically.
- ☑ Refrigeration temperatures are correctly maintained.
- ☑ Galley facilities are clear of waste.
- ☑ Exhaust vents and fire dampers are grease free.
- ☑ The Master or his designee and Chief Steward will conduct weekly inspections of the Galley and food preparation areas.

Inspections of the accommodation area must be carried out to ensure:

- ☑ Refrigerators and sink areas in the mess rooms are operational and clean.
- ☑ All cabins, hospital, toilet and washroom areas in the accommodation are in a hygienic condition.
- ☑ Laundries and linen stores in a clean and safe condition.
- ☑ The Master or his designee will conduct weekly inspections of the accommodation areas.

The result will be included in the Master's Weekly Report.

4.8 Medical Arrangements

Each AMHS vessel is equipped with a hospital/medical room. Vessels carry equipment and supplies to respond to most emergencies. EMT/ETT trained personnel are on each crew and available to respond to emergencies. It is not the intent of AMHS to provide comprehensive long term care for passengers or crew in need of medical assistance but rather to effect timely access to shore based facilities and medical expertise.

The Chief Purser is responsible for the maintenance and upkeep of the hospital room and medical supplies. The Chief Purser coordinates response to any medical emergencies and/or situations as they arise.

4.9 Manning and Relieving Requirements

General

Ship's personnel are hired through the AMHS central office. Some Officers may be hired through the MEBA or MM&P hiring hall.

Deck, Engineering, Steward Officers and Pursers are selected by the respective Operations sections in the AMHS central office.

Changes in manning after a normal crew change are reported to the AMHS central office by the Master via the Master's Weekly Report.

☞ 🕮 SMS – Procedures Manual - - SOP/01 – Safe Manning

Relieving Requirements - Master

When a change of Master takes place the relieving Master must be informed by the departing Master of all important operational features of the ship including the following:

- Maneuvering capabilities.
- Condition of readiness.
- Personnel matters.
- Other information relevant to the safety of the crew, the ship and the environment.

The relieving Master must ensure the ship is seaworthy and there are sufficient quantities of the following on board to complete the next planned voyage plus an appropriate safety margin:

- Bunkers.
- Stores and provisions.
- Water.
- Charts and navigational publications.

The relieving Master, in consultation with the Department Heads, must ensure the following are in good working order before sailing:

- Navigational equipment.
- Main and auxiliary machinery.
- Fire-fighting equipment.
- Life-saving equipment.
- In addition the departing Master should also ensure the relieving Master is informed of any scheduling changes or conflicts, anticipated unusual tidal or weather conditions, or any situation which might result in delay of the vessel.
- The relieving Master should be afforded sufficient time to become familiar with the ship's situation and condition.
- When the changeover is completed, the relieving Master will record that fact in the Bridge Log Book.

Relieving Requirements - Officers

A relieving Officer must make an inspection of those parts of the ship and its equipment under the Officer's responsibility. Any discrepancies must be reported to the Master.

The Chief Engineer's signature in the Engine Room Log Book will constitute acknowledgment of fulfilling the proper relieving requirements. Likewise, each Deck and Engineering Officer's initial signature in their respective log books will constitute acknowledgment of fulfilling the proper relieving requirements.

☞ 🕮	SMS – Procedures Manual - - SOP/02 – Induction and Familiarization

The following are relieving requirements for ship's officers**:**

- Relieving Chief Mates must be informed of the operational status of the vessel, Deck crew status, ongoing cargo operations, any unusual attributes of cargo on board, and any outstanding work or repair items or ongoing jobs concerning deck machinery or safety equipment.

- Relieving Deck Officers must be informed of the operational status of the vessel, any outstanding discrepancies in safety equipment, navigational equipment, charts or publications, any scheduling changes or conflicts, and any anticipated unusual tidal or weather conditions.

- Relieving Chief Engineers must be informed of the operational status of the vessel with particular regard to machinery and associated equipment. Ongoing and/or needed maintenance/repair work, personnel status and issues, consumable liquid status and any other issues which may effect the performance of their department.

- Relieving Engineering Officers must be informed of the nature and status of vessel machinery and associated equipment, appropriate personnel status and issues, and any other issues pertinent to the performance of their duties.

- Relieving Chief Stewards must be informed of the condition of galley and associated equipment in their department, personnel status and issues, stores status and any other issues pertinent to the performance of their department.

Relieving Requirements - Crew

Joining crew members are to report to the appropriate Department Head. In addition all relieving crew must report to the Purser's Office and present their Seaman's Document and appropriate training documentation.

Joining crew members will be provided with a Station Card, which denotes their Fire and Abandon Ship stations. It is the responsibility of all crew members to maintain possession of this card for the duration of their assignments. Upon completion of the assignment, crew members will return the Station Cards to their Department Heads.

All crew members shall conform with the Company's safety induction and ship familiarization program.

☞ 🕮	SMS – Procedures Manual - - SOP/02 – Induction and Familiarization Station Card

Organization

All ship's personnel are assigned to either the Deck, Engineering, Steward, or Purser Departments.

The Chief Mate has direct control over the Deck Department.

The Chief Engineer is responsible to the Master for the Engineering Department.

The Chief Steward is responsible to the Master for the Steward's Department.

The Chief Purser is responsible to the Master for Purser's Department.

☞ 🕮	SMS – Safety Management Manual

Each Department Head must keep the Master informed of the following:

- Any work in progress.
- Equipment and machinery status.
- Performance and conduct of personnel.

All Officers are assigned specific and general responsibilities within the ship organization. They must be aware of the responsibility that goes with their rank or position and ensure that their subordinates are also aware of that responsibility.

☞ 🕮	AMHS Essential Functions – Demands, Job Analysis

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5.0 THE SHIP IN PORT

5.1 Watchkeeping in Port, including Anchor Watches

General

When in port and in operational status, a Deck Officer and a Engineer Officer are to be aboard at all times with sufficient crew members to deal with fire or other emergency. Watches will be set according to the Master's and the Chief Engineer's instructions. Watch keepers must:

- Remain vigilant.
- Ensure the safety of life, the ship, its passengers and port facilities.
- Comply with international and national regulations and local rules of the port.
- Maintain order to ensure the normal routines of the ship.

☞ 🕮	STCW Convention & Code ICS – Bridge Procedures Guide COLREGS

In port, the Deck Department must post the following watches:

- Gangway/safe access watch for visitor control.
- Mooring watch to check the state of the moorings at regular intervals, especially if the moorings are tidal.
- Roving security and fire patrol.

The Engine Department must ensure a fire watch is maintained.

The Engineer on Watch in port must log the time of taking bunkers, soundings and temperatures and the amount of bunkers and fresh water received, if available.

When the ship is moored or anchored at an open roadstead, the Engineer on Watch must maintain electrical power generation. The main engines must be kept ready for use at short notice, unless instructed otherwise by the Chief Engineer after consultation with the Master.

If an emergency threatens the safety of the ship, people aboard and the environment, the Officer of the Watch must:

- Raise the alarm.
- Inform the Master or most senior Officer on board.
- Take any necessary remedial action.
- Take every precaution to prevent pollution.

- Offer assistance to ships or persons in distress.
- Take the necessary precautions to prevent accidents or damage when propellers are to be turned.
- Enter in the appropriate Log Book all important events affecting the ship.

☞ 🕮	SMS – Ship Emergency Manual

Trim and Stability Monitoring

A good trim and adequate stability must be maintained so that the ship can leave the berth or mooring quickly in an emergency.

The Deck Officer of the Watch must be aware of the current trim and stability data so that shore fire fighters can be advised of the approximate quantities and location of any water that may be pumped on board in the event of fire.

☞ 🕮	Vessel's Trim & Stability Book Latest Vessel Sounding Sheet

Inspections

The Deck Officer of the Watch is to make rounds to inspect the ship at appropriate intervals, paying particular attention to:

- Gangway and mooring lines.
- Draft, under keel clearance and state of the ship to avoid dangerous listing or trim during ballasting operations.
- State of the weather and the sea.
- Water levels in bilges and tanks.
- Display of any signals or lights.
- Observance of all regulations concerning safety precautions and fire protection.
- All persons on board and their location, especially those in remote or enclosed spaces.

Ship at Anchor

Normal Watchkeeping routines shall continue when the ship is at anchor. When at anchor, the Officer of the Watch must:

- Determine the ship's position on the appropriate chart as soon as practicable.
- Check at frequent intervals whether the ship is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects.
- In conditions of low visibility use radar as necessary to determine any drag.
- Inform the Master immediately if the ship starts to drag and initiate all necessary measures.
- Maintain an efficient look-out.
- Notify the Master if visibility deteriorates. Ensure that periodic inspection rounds of the ship are carried out.
- Observe meteorological and tidal conditions and monitor the sea state.
- Ensure compliance with the applicable pollution regulations.
- Ensure the state of readiness of the main engines and other machinery is in accordance with the Master's instructions.
- Ensure the ship exhibits the appropriate lights and shapes and that the correct sound signals are made when required.

In fog, the bridge must be manned and operated with special precaution.

☞ 🕮	SOLAS SMS – Bridge Practices Manual COLREGS 33 CFR 164.19

☞ ✓	SMS – Operational Checklists & Forms Manual – Anchoring & Anchor Watches

5.2 Liaison with Agents and Port Authorities

On arrival the Master must produce the ship's register and all appropriate ship's papers for inspection and provide the port authority with such information as may be required by local regulations.

The Master has the responsibility for liaison with persons ashore including:

- Port authorities.
- Pilotage and tug services.
- Immigration and health control.
- Customs.
- Fire services.
- Police.

The Chief Purser is responsible to the Master for compiling the necessary Custom's and Immigration forms when proceeding to and from foreign ports.

☞ 🕮	Port Information Booklet

Continuous liaison with shore facilities and personnel is important during passenger operations and will ensure that the following are readily available when required:

- Adequate storing, and berthing / un-berthing facilities.
- Latest navigation, weather forecasts and charts.
- Latest security information.

Restrict correspondence and communications between the ship and shore facilities to the Master, Heads of Departments or duly authorized AMHS personnel, agents or representatives. Retain copies of any correspondence in the appropriate ship's file.

5.3 Compliance with Load Line Regulations

Before sailing, the Master must ensure the ship complies with International Load Line Convention regulations or the USCG assigned maximum mean draft limitation as specified on the vessel's posted Stability Letter. Because an overloaded ship is considered unseaworthy, failure to comply may lead to prosecution.

☞ 🕮	46 CFR 78.17-22 Vessel's Trim & Stability Book Stability Letter International Convention on Load Lines Part 6.2 of this Manual

5.4 Ship Immobilization

The ship and its equipment is to be maintained in a state of operational readiness as required by local port or terminal regulations, AMHS instructions and Master's Standing Orders.

Repairs which would immobilize the ship in port are only to be carried out with the permission of the AMHS. Repairs requiring the assistance of shoreside facilities must be kept to a minimum and limited only to critical or emergency situations which by their nature affect seaworthiness. Voyage and emergency repairs will be arranged as necessary based upon the information provided.

The practicality of undertaking scheduled or planned maintenance with repair activities must always be considered and the Master will be notified prior to arrival in port of any specific repairs and/or maintenance to be undertaken.

☞ 🕮	Part 2 of this Manual

5.5 Oil Spill Precautions

Many operational spills can be prevented, or their effects minimized, by following the correct procedures before, during and on completion of transfer operations.

☞ 🕮	AMHS's SOPEP Manual SMS – Ship Emergency Manual

☞ ✓	SMS – Ship Operational Checklists & Forms - - Ship-in-Port Checklist(s)

5.6 Use of Port Reception Facilities

If port reception facilities are required, the facility operators should be advised in writing of the quantity and content of any oil residues or other noxious liquids or substances required to be discharged.

Special wastes, discharged to a conveyance for direct transportation to reception or disposal facilities outside the port or terminal, are to be recorded along with the registration number of the vehicle removing the waste.

If the reception facilities are non-existent or inadequate for the ship's requirements, the Master should resolve the problem with the port authority or terminal operator. If the problem cannot be resolved, the Master is to report the inadequacy to the AMHS central office.

The Master is to operate the ship in a manner that generates the minimum level of residue oil or noxious liquid waste.

Garbage must be disposed of in accordance with the requirements of Annex V of MARPOL 73/78 Consolidated Edition, 1997.

☞ 🕮	MARPOL AMHS's Waste Management Manual

5.7 Air Pollution

Care must be taken to control and minimize the emission of funnel smoke.

The cleaning of funnel uptakes and boiler tubes while the ship is alongside or within the port area is strictly prohibited.

The Officer of the Watch must report to the duty Engineer immediately sparks or excessive smoke is seen from the funnel. The duty Engineer must take immediate corrective action to stop sparks and reduce smoke emission to a level acceptable to the port authority.

5.8 Ship Security

General Precautions

Ship security is the responsibility of every crew member. The threat of illegal acts against or on the ship requires constant alertness and all precautions must be taken against the possibility of theft, stowaways, smuggling and terrorism.

The gangway watch must ensure that unauthorized persons are not allowed on board. Persons with legitimate business on board, such as salesmen or ship chandlers, should produce verifiable proof of identity, be given limited access and are to be escorted at all times on the grounds of safety. Persons identifying themselves as AMHS employees or agents, contracting workmen or technicians should also carry suitable identification and shall be escorted or directed to the Master, Chief Engineer or deputizing Officers on the grounds of safety.

The Officer of the Watch and the gangway watch should be advised of any workers or technicians who will be boarding the ship. Any maintenance or repair work that requires shoreside personnel is to be noted in the Deck Log so the relieving Officer is aware of personnel on board or may be visiting the ship.

The Chief Steward is to ensure that the galley, provisions rooms and refrigerated spaces remain locked during periods when they are unattended.

If the Bridge is left unattended in port, the Bridge wing doors should be locked. The watch personnel must be alert and challenge, without hesitation, anyone found wandering on board and who cannot be identified.

The Watch Engineer is responsible for the security of the machinery spaces and is to deny access to any unauthorized persons on the grounds of safety. The Watch Engineer will have custody of the keys to the machinery spaces, engine stores and workshop and will not pass these keys to any third party without the consent of the Chief Engineer.

Theft

Never assume the ship is secure. The Master should ensure that unattended quarters, messes and cabins are regularly patrolled. Pantries, cleaning/linen lockers and deck lockers should be kept locked or padlocked. Individual crew members are responsible for the safety and securing of their personal items and quarters if applicable.

All portable equipment or tools, not under the control or attention of a specific crew member, should be placed in locked compartments.

Thieves can disguise themselves as workers or technicians. They may wear overalls bearing a company name, have a seafaring background or a knowledge of ship layout and may appear to be on legitimate business. If any doubt exists:

- Verify the person's identity.
- Detain at the gangway head.
- Check with the Officer of the Watch (using VHF as appropriate).
- Escort the person at all times until ordered to do otherwise.

Stowaways

In any port and in particular in areas where stowaways are known to present a problem, take the following precautions:

- Maintain a continuous watch on the gangway and a roving deck watch whilst the ship is in port.
- At anchor, maintain a roving watch with particular attention paid to any areas of possible access.
- Provide maximum illumination of all deck areas during hours of darkness.
- Illuminate over side shadow areas where possible.
- Pay attention to the stern and bow areas as these are high risk boarding areas.
- Restrict the areas where shore personnel are allowed to work.
- Keep all doors locked to unoccupied compartments.
- Close open spaces as far as practicable.

Officers and crew should also be on the alert for strangers being observed on board who are not involved in passenger operations or repair or maintenance work. Such persons must be challenged and sent ashore as soon as possible.

☞ 🕮 SMS – Ship Emergency Manual

Drug Trafficking

Compartments not in use should be locked if practical. In any case public access to these spaces should be restricted. These include but are not limited to:

- Steering gear spaces.
- Wheelhouse and Chartroom.
- Deckhouse.
- Forecastle.
- Storerooms.
- Unused cabins and public rooms.
- Unattended offices.
- Any other areas which could be used to hide drugs.

Ship's laundry and stores supplies should be check to ensure that suspicious articles do not come on board with them.

5.9 Bunkering

General

WARNING **The transfer of oil is potentially hazardous to people and to the environment.**

Planning, good communications and the training of personnel are all important.

Fueling operations must be completed without threat to either:

- Personnel.
- Environment.

Fuel Acquisition

Fuel is supplied by various venders throughout the ports serviced by the AMHS fleet. Scheduling is arranged by the Chief Engineer to satisfy the requirements of safe operation and reserve as determined by the Master. The Chief Engineer will inform the Mate of time and duration of bunkering to avoid conflict with loading.

Fuel orders are generally placed by phone to the contracted vendor each week.

Particular procedures followed by each vessel will vary slightly, due to differences in vessel design and the operating situation. Those particulars are addressed in the bunkering manual.

Safety margins of fuel quantity reserves, as well as maximum amount tanks are filled, vary depending upon the operating schedule of the vessel.

☞ 🕮	AMHS's Fleet Bunkering Manual AMHS's SOPEP Manual

Fuel Quality Testing

Fuel oil samples are taken every time the vessel is fueled in accordance with regulations 46 CFR 78.17-75.

☞ 🕮	46 CFR 78.17-25

It is sometimes necessary to have the fuel oil surveyed to ensure that the correct grade and standard of fuel is being taken on board.

When a fuel oil surveyor is required, AMHS will make necessary arrangements and will advise the Master in due time. The surveyor will normally supply equipment and material necessary to carry out the survey.

The surveyor should withdraw three samples of the fuel oil being taken on board. The Chief Engineer should oversee the sampling if possible. Two sealed samples are to be kept on board and the surveyor will normally take one sample for laboratory testing.

The fuel oil samples must be identified by the following:

- ☑ Date.
- ☑ Ship.
- ☑ Grade.
- ☑ Port from which lifted.
- ☑ Amount of fuel oil lifted.
- ☑ Specific gravity.

In case there are problems with the fuel oil, the samples must remain on board at least until that fuel oil has been used.

Fuel oil samples for testing should be forwarded to the nearest approved laboratory. The results of the test will be sent direct to the ship and copied to AMHS.

Regulatory Requirements

Failure to comply with safe bunkering procedures may result in one or more of the following:

- The arrest of the ship.
- Fines or imprisonment for the Master, the Officers and the crew.
- Substantial financial penalties for AMHS.

The bunkering procedures consist of this manual and the following items:

- Bunkering Plan. Posted as required.
- Declaration of Inspection. Complete and keep as a record.
- Discharge of Oil Prohibited sign. Post copies of this sign in the ship's office and in the machinery space/Engine Control Room.
- Communications Guide poster. Display by the point of transfer.
- Fuel oil transfer company operations manual.

Always work to the local regulations if they are stricter than those of AMHS. If not, work to AMHS procedure.

Designated Person in Charge

The Chief Engineer is responsible for fueling operations. Usually an Assistant Engineer is the Designated Person in charge of transfer operations.

The title of the person in charge is to be listed on the Bunkering Plan. The person in charge of bunkering must make sure all bunkering personnel understand:

- Individual operational procedures.
- Individual responsibilities and duties.
- The need for caution.

The Designated Person in charge is responsible for the following:

- Training and supervising bunkering personnel.
- Supervising fueling communications with the facility or fueling ship/barge.
- Display the communications guide poster at the point of transfer.
- List all personnel involved in fueling and the title of relief's.
- Record in the Engine Room Log, information as outlined in the bunkering manual.

If the Designated Person in charge is unable to continue, the Chief Engineer must authorize the formal transfer of responsibilities to another qualified Officer. Record the transfer of responsibilities on the Bunkering Plan.

Make sure the relieving Officer is aware of the following:

- Valve settings.
- Ullages.
- Ship draft.
- Flow rates.
- Communication arrangements.

Deck Officer of the Watch

The Deck Officer of the Watch must log information as outlined in the Bunkering Manual.

During bunkering, the Deck Officer of the Watch must be ready to:

- Deal immediately with emergencies.
- Give prompt attention to messages from the facility or bunkering ship/barge.

Deck Watch

Assign at least one roving crew member to regularly inspect the ship's moorings and to check for oil spillage:

- From vents and overflow pipes.
- On the water around the ship.

Any roving watchkeeper seeing oil on the deck or on the water, must report immediately, preferably to the Designated Person in charge, alternatively to the Watch Engineer first, and to the Deck Officer of the Watch second.

All Personnel

Fueling personnel who are on watch during topping off must remain at their work stations.

All ship's personnel, whether they are directly involved or not, must be vigilant during fueling operations.

Any person observing a spill of oil, on the deck or on the water, must report it immediately, preferably to the Designated Person in charge, alternatively to the Watch Engineer first and to the Deck Officer of the Watch second.

☞ 🕮	AMHS's SOPEP Manual AMHS's Fleet Bunkering Manual

Pre-transfer Preparation

WARNING **The transfer of oil is potentially hazardous to people and to the environment.**

Personnel assigned to fueling must understand the following:

- Planned bunkering operation.
- Characteristics and limitations of the bunkering equipment.

Training

The Designated Person in charge of bunkering on the ship must hold regular training sessions for all the ship's bunkering personnel.

☞ 🕮	AMHS's SOPEP AMHS's Fleet Bunkering Manual

Pre-transfer Conference

The pre-transfer conference must take place between the Designated Persons in charge of bunkering operations. The conference must be held, in person, on board either the ship or the bunkering ship/barge or at the facility.

The language of the ship's personnel may be different from the language of the personnel on the facility or the bunkering ship/barge. In this case, a person must be present at the conference who is proficient in both languages.

Complete the Bunkering Plan at the pre-transfer conference.

Bunkering Checklists

Operational checklists are intended for training and informational purposes and should be used as such when practical.

☞ 🕮	SMS – Operational Checklists & Forms Manual AMHS's Fleet Bunkering Manual AMHS's SOPEP Manual

Starting the Transfer

The Designated Person in charge on the ship must tell the person in charge at the facility or on the other ship when transfer operations are ready to start.

Start the transfer operation slowly. Check that the oil flows into the correct tank and that all hose connections are tight before increasing the oil flow to the agreed loading rate.

During the Transfer

Bunkering must stop:

- In the event of a fire on the ship or in its vicinity.
- When there are localized thunder and lightning storms.
- When a heavy and dangerous vapor accumulation exists around the ship.
- If a pipeline, hose or loading arm connection bursts or leaks.
- When there is an tank overflow.
- In the event that the facility or bunkering ship/barge ceases to be manned.

The Designated Person in charge must comply with the following conditions during transfer:

- Maintain communications between the person in charge at the transfer facility.
- Before shutting or changing over any valve on the ship, alert the facility or bunkering ship to possible changes in pressure.
- Keep the bunkering rate within safe and agreed limits.
- Make frequent checks on the following:
    - Hoses or loading arms.
    - Water around the ship.
    - Mooring lines.
    - Tanks that have been topped off.
    - Positioning of scupper plugs.

Make frequent inspections to confirm that oil is entering only the designated tanks. This should be done by sounding potentially affected tanks, as well as continuous sounding of affected tanks.

During transfer, if there is doubt about the safety of the operation, the person in charge must stop the transfer and carry out an investigation.

Flow Surges

Pressure surges may damage or rupture sections of the pipeline system, therefore, changes in pumping rate and the closure of valves should be gradual and planned.

Containment Arrangements

Containment must be provided under each bunker tank vent and at each bunkering manifold.

Scupper plugs must be in place during all transfer operations.

Emptying Instructions

Empty the save-all by the following method:

- Remove oil from save-alls by baling or using a suitable pump.
- Put uncontaminated oil in the storage tank.
- Put contaminated oil in used oil tank.
- Remove any remaining residue using absorbent mat.

Clean Up

The ship has equipment for the containment and clean up of spills on deck. Use sorbent materials to soak up spilled oil, and use a dispersing agent to remove the final traces of oil from the deck.

CAUTION **Do not dispose of used clean up materials or dispersing agents or oil over the side.**

☞ 🕮	AMHS's Fleet Bunkering Manual AMHS's SOPEP Manual AMHS's Waste Management Manual SMS – Occupational Health & Safety Manual

Topping Off Tanks

The Designated Person in charge must supervise the topping off operation and carry out the following procedures:

- Give notice to the facility or bunkering ship/barge when ready for topping-off.
- Reduce flow rate before and during topping-off.
- Test and maintain communications with the terminal or the other ship before and during topping-off.
- Call more crew members to assist if required.
- When shutting down, close the facility's valves or the bunkering vessel's valves before the ship's valves.

The Designated Person in charge must ensure the ship's manifold valves and tank valves are closed during any temporary stoppages of transfer operations.

Check ullages regularly to prevent tanks from overflowing because of leaking valves or incorrect operations.

Completion of Transfer

When bunkering is completed, the Designated Person in charge must check personally that all necessary tank valves are closed and automatic tank vents are properly lined up.

To protect against the entry of sea water, the Designated Person in charge is responsible for securing all hose connections.

Pipelines and hoses or arms between the shore control valve and the ship's manifold must be cleared after bunkering is complete. This procedure will be influenced by the relative heights of the ship manifolds and facility manifolds and the availability of shore facilities.

Any oil remaining in the pipeline system to the ship's tanks must be drained. Leave sufficient ullage to take the drainings.

Before disconnecting hoses or arms, open the ship's manifold drain cock and drain to save-alls. Blank the manifolds securely after hoses or arms are disconnected.

Empty portable drip pans according to current instructions.

5.10 Stores and Provisions

Inspection and Storage

Provisions, sundry stores and Steward's Department equipment should be inspected on delivery for quality, quantity and weight. Any provisions or stores that are suspected of vermin contamination must be returned to the supplier.

The accepted provisions should be identified so they can be used in rotation. This is to eliminate waste caused by infestation and "out of shelf-life" spoilage.

Dispose of packaging as soon as the contents are removed. Do not be reuse packaging because it may be or may become the source of infestation or vermin.

Place stores on pallets several inches above the deck to allow for cleaning around and under them.

CAUTION **Do not throw unwanted stores, packaging or garbage overboard**

Food waste should be disposed of according to current regulations.

☞ 🕮	MARPOL Part 8 of this Manual AMHS's Waste Management Manual

Lifting and Handling

Stores handling equipment should only be operated by competent persons.

6.0 PREPARING FOR SEA

6.1 Reading and Recording Drafts

On completion of loading and before departure, the ship's draft must be determined to ensure the ship complies with applicable Load Line or draft restrictions. The ship's draft must be entered into the Bridge Log Book.

☞ 🕮	Vessel's Trim & Stability Book 46 CFR 78.17-20

6.2 Stability and Ballast Handling

CAUTION **Non-compliance with the requirements of the Stability Book can place the vessel in an unstable and potentially dangerous condition.**

The Master is to ensure that the ships stability condition meets the requirements contained in the Trim & Stability Book at all times.

Trim & Stability Book

The vessel must carry a USCG approved Trim & Stability Book. This book details the stability requirements for all conditions of service.

When carrying out loading / discharging operations, the Master shall use the information contained in the Trim & Stability Book to ensure that the vessel has adequate stability and freeboard at all times.

On completion of loading, the following shall be ascertained by the Loading Officer:

- Forward and aft drafts.

These values can be obtained from a draft gauge system or visually from the ships marks. On vessels fitted with a draft gauge system, values should be compared daily and a corresponding entry made in the Bridge Log Book.

Prior to departure , the Master or nominated Officer shall verify the stability condition.

The Trim & Stability Books are set up so that adequate freeboard and stability are assured providing the following criteria are met:

- The draft limit specified in the vessel's posted Stability Letter is not exceeded.
- The vehicle loading parameters contained in the vessel's Trim & Stability Book are not exceeded.
- The ballast conditions contained in the vessel's Trim & Stability Book are not significantly changed.
- Any tankage limitations contained in the vessel's Trim & Stability Book are not exceeded.

Each vessel's Trim & Stability Book contains calculated stability scenarios to be used for comparison and verification of the vessel's condition before departure. An appropriate log entry concerning the vessel's stability condition is to be made in the Bridge Log Book prior to each departure.

If the ship's stability does not meet the statutory requirements the vessel is not permitted to leave the berth; immediate action should then be initiated to determine the cause and remedial action taken.

It is essential that all Loading Officers are familiar with the ships stability details, and in particular, draft, trim and list limitations to be observed during cargo operations.

☞ 🕮	46 CFR 78.17-20

Ballast Handling

All Loading Officers must be familiar with the vessels ballast handling systems prior to assuming loading responsibilities. Ballast and heeling tank systems are only to be used on the authority of the Master.

☞ 🕮	SMS – Crew Safety Training Manual

In accordance with AMHS Environmental Policy, the Master should endeavor to minimize the requirement to take ballast from waters known to be contaminated. This action should not take precedence over the requirement to take ballast for operational and stability requirements.

Ballast transfers are carried out by a designated Engineer, upon orders from the Master and so noted in the Engine Room Log Book.

When carrying out the required operation, the designated Officer or crew member must positively monitor gauges or soundings to ensure the required action is taking place. When the ballasting operation has been completed, the designated Engineer should notify the Bridge.

All valves and pumps are to be secured on completion of use.

☞ 🕮	SMS – Ship Operations Manual Vessel's Trim & Stability Book Master's Standing Orders

☞ ✓	SMS – Operational Checklists & Forms Manual - - Ro-Ro Passenger Vessel Departure Checklist

6.3 Assessment of Weather Conditions

An assessment of the weather likely to be expected during the voyage should be made from the information available from all sources.

The Second Mate must ensure that the NAVTEX system is in good working order and that the broadcasts are being monitored.

6.4 Securing for Sea

Hatches and other Openings

Whenever the ship is entering or leaving a port, it is vulnerable to collision due to the restricted maneuvering area. It is especially vulnerable in a loaded condition when the under keel clearance is reduced.

To restrict the ingress of water if the ship is damaged, all cargo ports, covers and ventilators must be securely closed. All bunker openings must be secured.

☞ 🕮	46 CFR 78-17.33

Provisions

Prior to each voyage, the Department Heads or their designees must assure their areas of responsibility are secure for sea.

6.5 Equipment Testing

Test of Main Engine and Generators

The Watch Engineer should be notified at least fifteen minutes before the main engine is required.

Permission is to be obtained from the Deck Officer of the Watch before operating the main engine.

Before giving permission, the Deck Officer of the Watch is to ensure the following:

- ❍ Bunker lines disconnected from ship.
- ❍ Ship is moored/anchored securely.
- ❍ Propeller is not obstructed.
- ❍ Loading ramp is clear of ship.

During engine test the Deck Officer of the Watch is to maintain a watch on the mooring lines or anchor chain. If the propeller thrust causes undue strain on the mooring lines or anchor chain the engine room must be told to cease operations immediately.

Mooring lines must be kept taut to prevent the ship from breasting away from the berth.

The main generators must be tested and paralleled on-line with the emergency generator or additional generator on standby.

☞ 🕮	33 CFR 164.35

☞ ✓	SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Bridge) Checklist SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Engine) Checklist

Test of Telegraph

Before they use or test the Bridge control system, new Deck Officers joining the ship must be made aware of its operation, including changeover from Bridge to Engine Room control.

Unless a malfunction occurs, or Engine Room control is considered necessary, Bridge controls are to be used when maneuvering and on the high seas.

If a fault occurs in the Bridge control system, it must be disconnected and the Engine Room control must be used.

When the vessel is in maneuvering status and the Engine Room is on standby, any bell other than full-ahead is to be considered an emergency and the Engine Room will take control and answer the bell.

A bridge main propulsion control loss drill will be held weekly. During this drill a docking, or departure at the discretion of the Master, will be conducted on Engine Room control. The drill will be logged in the Bridge Log Book and detailed in the Master's Weekly Report.

The Bridge control system must be tested to ensure it is operable before all departures.

The Bridge main engine emergency stop controls if fitted should be tested at least monthly.

☞ ✓	SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Bridge) Checklist SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Engine) Checklist

Test of Anchoring & Mooring Equipment

Ensure there is power to the anchor windlass and deck capstans and that all are operational.

☞ 🕮	SOLAS

☞ ✓	SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Bridge) Checklist SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Engine) Checklist

Test of Navigation and Communications Equipment

A check of the navigation and communications equipment must be carried out before each sailing. Any defects must be reported immediately to the Master to enable the necessary repairs or adjustments to be carried out before sailing. The following equipment is to be checked and the results logged in the appropriate log book:

- internal communications systems between the Bridge and Engine Room, including telegraphs.
- Bridge test of steering gear.
- Bridge test of bow thruster.
- Electronic navigation equipment.
- Gyro and repeaters.
- Navigation lights and ship's whistle
- HF/VHF transceivers.

Bridge and Engine Room clocks must be compared weekly and synchronized if necessary.

The following tests of navigation and communications equipment must be carried out no more than 12 hours before getting underway or entering US waters, or weekly if applicable, and the results logged in the appropriate log book:

- ✍ primary and secondary steering gear including a visual check of the steering gear and test of communications between Bridge and steering gear compartment.
- ✍ All internal vessel control communications and vessel control alarms.
- ✍ Main propulsion machinery, ahead and astern.
- ✍ Standby generator for as long as necessary to show proper functioning.
- ✍ Storage batteries for emergency lighting and power systems in vessel control and propulsion machinery spaces.

☞ 🕮	33 CFR 164.25 46 CFR 78.17

☞ ✓	SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Bridge) Checklist SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Engine) Checklist

6.6 Crew On Board, at Stations and Fit for Duty

Crew members returning to duty from any leave period or following injury or illness are to report their return and fitness for duty to their Head of Department.

Through the use of familiarization training all crew are to be made aware of and understand their:

- responsibilities under the SMS.
- Required watch routines.
- Emergency duty stations.
- Obligations for fitness for duty.

The maintenance of a high standard of health and fitness is particularly important if accidents are to be avoided.

☞ 🕮	SMS – Occupational Health & Safety Manual SMS – Ship Emergency Manual AMHS – Essential Functions – Demands, Job Analysis

☞ ✓	SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Bridge) Checklist SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Engine) Checklist

6.7 Stowaways

Before departure from ports in areas where stowaways are known to present a problem, take the following actions:

Deck

- s soon as any outside work has been completed check deck area and forecastle.
- Outside accommodation and lifeboats.
- Inside accommodation.
- Check regularly before departure.

If practical, check all storerooms and lockers on deck and secure before sailing.

Accommodation

- ❍ Ensure all working personnel have disembarked.
- ❍ Lift the gangway.
- ❍ Post a watchman at the gangway and at the accommodation entrance (only one entrance unlocked).
- ❍ Search the accommodation if considered necessary.

6.8 Report to the Master by Each Responsible Officer

When voyage preparations are completed each Department Head must report any operational limitations to the Master.

Documentation of Sailing Condition

All documentation that relates to the condition of the ship including draft surveys, stability assessments and seaworthiness must be completed to the satisfaction of the Master before the ship sails.

☞ ✓	SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Bridge) Checklist SMS – Operational Checklists & Forms Manual - - Preparing for Sea (Engine) Checklist

6.9 Assessment by the Master to Sail

The Master must make an assessment of the ship's suitability to sail based on the reports from each Department Head and upon the weather condition and sea state. The Master must ensure that all Statutory and AMHS requirements are complied with and that any reported deficiencies or nonconformities to the SMS have been evaluated and are acceptable or require rectifying before sailing.

The Master has the overriding authority to make the decision, based on all the information received, whether to proceed to sea or not.

The ship must not sail if any of the following are defective:

- ❍ Steering gear.
- ❍ Main engine controls.
- ❍ Emergency fire pump and emergency generator.
- ❍ No operational radar.
- ❍ Communications equipment.
- ❍ Navigation lights.

The ship must not sail if there are any deficiencies that the Master or Chief Engineer consider would affect the safe operation of the ship, or the safety of lives on board or would present danger to property or the environment.

6.10 Departure Clearance

For the ship to depart on time, the port authorities, if applicable, and relevant shoreside personnel must be informed of the planned departure time. This enables the shoreside personnel to be in place when required.

Pilotage

The presence of a pilot on board does not relieve the Master of responsibilities and the orders given to the helm and the Engine Room are to be monitored closely. An approach plan should be agreed between Master and the pilot and the helmsman must be made aware when the pilot starts giving the maneuvering advice.

☞ 🕮	SMS – Bridge Practices Manual

☞ ✓	SMS – Operational Checklists & Forms Manual - - Pilotage & Pilot Card Checklist

The Master must not allow the pilot to disembark if to do so would jeopardize the safety of the ship. If the Master decides the prevailing conditions would endanger the ship or the pilot, the Master should inform the pilot that disembarkation is not possible and it is necessary to remain on board until next port of call.

If the pilot is leaving by helicopter the Chief Mate must make the necessary arrangements on the deck.

☞ 🕮	ICS Guide to Helicopter/Ship Operations

☞ ✓	SMS – Operational Checklists & Forms Manual - - Helicopter Operations Checklist

7.0 THE SHIP AT SEA

7.1 Bridge Watchkeeping

Deck Officer of the Watch

The Deck Officer of the Watch (or Mate/Watch Mate) is responsible to the Master for the safe navigation of the ship and must therefore comply with all regulations which govern that objective.

The Deck Officer of the Watch must be familiar with standards of navigation lights, the heights and limits of arcs of sight of navigation lights and of the use of fog signaling equipment.

The ship's sound signaling apparatus should be used according to regulation.

☞ 🕮	COLREGS SMS – Bridge Practices Manual STCW Convention & Code 33 CFR 164.11

The Deck Officer of the Watch must take all necessary measures to prevent operational or accidental pollution of the marine environment and be aware of the consequences of such pollution.

☞ 🕮	MARPOL

The safety of the ship and its crew depends on maintaining an alert and efficient look-out. Therefore the Deck Officer of the Watch must:

- Keep a look-out posted at night, in poor visibility and congested waters (the look-out and the helmsman must not be same person).
- Be alert to the current situation regarding ships and landmarks in the vicinity.
- Be alert to changes in the weather, particularly visibility.
- Note the movement and compass bearing of approaching ships.
- Identify correctly any ship and shore lights.
- Interpret correctly the radar and echo sounder displays.
- Regularly monitor that the course is steered accurately and that helm orders are correctly executed.
- Continuously monitor relevant VHF channels to obtain local situation information.

☞ 🕮	Master's Standing Orders 46 CFR 78.30-5 33 CFR 164.11

The Deck Officer of the Watch must be familiar with the handling characteristics of the ship, particularly the minimum stopping distance and turning circle, and be aware that other ships will have different handling characteristics. When altering the speed of the ship, notice of any change of engine movements should be made to the duty Engineer.

☞	Bridge Maneuvering Poster

The Deck Officer of the Watch will continue to be responsible for the safe navigation of the ship despite the presence of the Master on the Bridge unless the Master specifically states that responsibility has been assumed and this fact is mutually understood by all members of the Bridge team.

☞ ✓	SMS – Operational Checklists & Forms Manual - - Changing Over the Watch – Bridge - Checklist

Requirements in Bad Weather, Ice and Fog

If storm conditions are to be unavoidably encountered on the recommended route, reduce speed or change heading.

Recommended routes are planned to avoid circular storms however, be guided by local reports of position, size and intensity of depressions.

Consider shipping additional ballast or changing ballast disposition on the approach of heavy weather.

Carry out an inspection of the ship to ensure:

- All gear is secured above and below decks.
- All ports, covers and doors open to the weather deck are closed and secured.
- All freeing ports checked clear.
- All crew advised.

The Deck Officer of the Watch must be kept informed of any crew working on deck or in areas which give rise to risk. Discontinue work at any location on the ship that could become hazardous due to changes in the sea condition.

At the onset of heavy weather, reduce the speed of the ship or alter course as appropriate.

☞ ✓	SMS – Operational Checklists & Forms Manual - - Navigating in Heavy Weather Checklist

In heavy ice, prevent damage to the bow plating by using only sufficient power to maintain headway and steerage.

☞ ✓	SMS – Operational Checklists & Forms Manual - - Navigating in Cold Weather & Ice Checklist

When conditions of low visibility set in or appear about to set in, notify the Master and take the following action:

- Place engines on standby and proceed at a safe speed.
- Ensure the ARPA is operating correctly.
- Station look-outs as the circumstances require.
- Sound whistles as prescribed by the Rules of the Road.
- Log the watch condition adopted and detail the precautions taken.
- Station an Able Bodied Seaman at the wheel.

The Master must determine the appropriate watch condition to set and assign personnel to perform the necessary duties. Any change of the Deck Officer of the Watch must be clearly logged.

☞ 🕮	COLREGS

☞ ✓	SMS – Operational Checklists & Forms Manual – Restricted Visibility Checklist

7.2 Engine Room Watchkeeping

General

The Engineer on Watch remains responsible for the ship's machinery for the duration of the watch.

The Engineer on Watch must keep within audible distance of the engine room and telephone alarms.

During the watch an accurate log must be kept of machinery operating parameters and any events relating to machinery operation together with the relevant times.

☞ 🕮	AMHS Essential Functions – Demands, Job Analysis

At sea, the Engineer on Watch must ensure the following:

- Bridge orders relating to changes in speed or direction of the engine are carried out immediately.
- The main propulsion and auxiliary systems are kept under constant supervision by the watch until properly relieved.
- The machinery spaces, steering gear spaces, and other spaces designated by the Chief Engineer are checked regularly for malfunctions, breakdowns and the ingress of water.
- Routine adjustments, maintenance and any other necessary tasks are carried out.

Watch personnel must report to the Engineer on Watch, anything that may affect the machinery and threaten the safety of the crew members, the ship or the marine environment.

Machinery spaces must not be left unsupervised or unattended.

Safety

The Engineer on Watch must brief watch personnel on any new potential hazards in the machinery spaces that could cause injury. All watch personnel must be aware who is responsible for the administration of First Aid.

All watch personnel must be able to locate and use the various types of fire fighting equipment and damage control gear and be familiar with the safety precautions.

☞ 🕮 SMS – Occupational Health & Safety Manual

The Engineer on Watch is to take necessary actions immediately to contain the effects of any damage resulting from equipment breakdown, fire, flooding, rupture, collision, stranding or other cause.

☞ 🕮 SMS – Ship Emergency Manual

Taking Over the Watch

The Engineer on Watch is not to hand over the watch if the capabilities of the relieving Engineering Officer are doubted. In such instances, the Chief Engineer must be informed immediately.

Before being relieved the Engineer on Watch must ensure the Engine Log Book is completed and signed.

☞ 🕮 Part 4 of this Manual

Before taking over the watch the relieving Officer must apprise himself of engine plant status, including all operating machinery. Any problems must be discussed with the Officer being relieved. If it is considered necessary, notify the Chief Engineer.

If any maintenance work is in progress the Engineer on Watch must cooperate with the Officer in charge of the maintenance work.

☞ 🕮 Part 2 of this Manual

The Engineer on Watch must be satisfied with the following:

- Watch members are capable of performing their duties.
- Standing Orders and any special instructions issued by the Chief Engineer regarding operation of the ship's systems and machinery.
- The nature of all work being performed on machinery and systems and any potential hazards.
- The level and condition of the bilges and bilge water holding tanks.
- The level and condition of fuel oil, diesel oil and lubricating oil in the reserve tanks, storage tanks and settling tanks, day tanks and other storage facilities.
- The volume of boiler feed water, ballast, potable water and all other fluids held on board.
- Any special requirements relating to sanitary system disposals.
- The condition and mode of operation of main and auxiliary systems.
- The condition of monitoring and control console equipment, with details of equipment being manually operated.
- Any potentially adverse conditions resulting from bad weather, ice or shallow water.
- Any special modes of operation due to equipment failures or adverse ship conditions.
- The availability of fire-fighting appliances.

The Engineer on Watch remains responsible for machinery space operations despite the presence of the Chief Engineer. If the Chief Engineer assumes that responsibility, the fact must be stated and mutually understood.

Periodic Checks of Machinery

It is the responsibility of the Engineer on Watch to ensure periodic checks are carried out of the following:

- Main and auxiliary machinery, FO/LO transfer and purification systems, boilers, control systems, indicating panels and communication systems.
- Steering system and associated equipment.
- Bilges.
- Piping.

Compartments containing machinery outside the engine room spaces are to be inspected as required by the Chief Engineer's Standing Orders.

Before the end of the watch, the Engineer on Watch must ensure that all events that occurred during the watch relating to the main and auxiliary machinery are logged.

Notifying the Bridge

Changes in speed or direction resulting from machinery malfunction, may endanger life, the ship or the marine environment. Therefore, to give the maximum available time to apply corrective action, the Bridge must be told before carrying out any actions in the machinery spaces that may cause:

- Reduction in the speed of the ship.
- Imminent steering failure.
- Stoppage of the propulsion system.
- Changes in the generation capacity of electric power.
- Any other threat to safety.

In addition to notifying the Chief Engineer, the Bridge is to be immediately informed should fire or flooding occur in the machinery spaces.

Congested Waters

During maneuvering of the ship, the Engineer on Watch must be ready to respond to orders from the Bridge and must ensure:

- All essential machinery that can be operated manually, is ready to do so, should it become necessary.
- An adequate reserve of power is available.
- Auxiliary machinery is readily available for use when maneuvering.

Restricted Visibility

An air supply at the correct pressure must be permanently available for fog sound signals.

Calling the Chief Engineer

Call the Chief Engineer or activate the Engineers Call Alarm immediately in the following circumstances:

- If engine damage or malfunctions occur which in the opinion of the Engineer on Watch may:
  - Endanger the safe operation of the ship.
  - Cause damage or a breakdown of propulsion machinery, auxiliary machinery or monitoring and governing systems.
- In emergencies or in other situations where the correct course of action is in doubt.

Even if the Chief Engineer has been called or the Engineers Call Alarm is activated, the Engineer on Watch must take whatever immediate actions are necessary for the safety of the ship where the circumstances require them.

7.3 Radio Watchkeeping

The Watch Officers are responsible for maintaining a continuous watch on the appropriate distress frequencies as required by national and international regulations.

☞ 🕮	SOLAS 33 CFR 26.04 33 CFR 26.05

Daily Radio Log Entry

All Radio equipment must be tested daily by the Watch Officers and an appropriate entry made in the Radio Log Book.

☞ 🕮	Part 3 of this Manual 47 CFR 80.409

Unauthorized Transmissions

In compliance with the radio regulations, unauthorized transmissions should, if possible, be identified, logged and brought to the attention of the Administration, quoting an appropriate extract from the radio log. Unauthorized transmissions include those made during distress transmissions, or any harmful interference incidents.

7.4 Security

Fire and Security Patrols

Patrols of the ship must be carried out at regular intervals as detailed in Standing Orders. Personnel on patrol shall be equipped with the appropriate portable VHF.

The patrols are carried out to ensure:

- Emergency exits are kept clear.
- Evacuation and escape routes are kept clear.
- Fire doors are kept clear.
- Fire hazards are minimized.
- Watertight / weather-tight openings are secure.
- No-smoking rules are observed.
- No suspicious items are on board.
- No stowaways are on board.

Patrols are to report back to the Deck Officer of the Watch if any of these items give cause for concern or if they consider anything else requires reporting.

☞ 🕮	46 CFR 78.30

Stowaways

If a stowaway is discovered while the ship is at sea inform the AMHS immediately. Follow the procedures detailed in the Ship Emergency Manual.

☞ 🕮	SMS – Ship Emergency Manual

Terrorism

All personnel should be made aware when terrorist actions are threatened or the country is placed in a heightened state of alert. Personnel should be reminded of the need for vigilance.

☞ 🕮	SMS – Ship Emergency Manual SMS – Ship Emergency Checklists & Forms Manual

7.5 Helicopter/Ship Operations

The clearance for a proposed helicopter operation are entirely at the discretion of the Master. The Master may curtail or stop the operation at any time for reasons of safety.

The Master must ensure that the personnel involved in the helicopter operation are informed of the procedures for such an operation.

☞ 🕮	ICS Guide to Helicopter/Ship Operations

☞ ✓	SMS – Operational Checklists & Forms Manual – Helicopter Operations Checklist

7.6 Discharge of Oily Water, Sewage and Garbage

Oily water, sewage and garbage must not be discharged over the side except as allowed by current regulations.

☞ 🕮	MARPOL AMHS's Waste Management Manual AMHS's Fleet Bunkering Manual AMHS's SOPEP Manual

All AMHS vessels are provided with USCG approved equipment for oily water separation. Such equipment is designed to allow overboard discharge of water only when oil content is no greater than 15 ppm.

Used oil products are retained aboard until quantity is such that discharge to a certified port reception facility is needed.

All AMHS vessels are equipped with approved Marine Sanitation Devices for treatment of sewage and/or gray water before overboard discharge. Additionally vessels are equipped for discharging sewage ashore should it become necessary.

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8.0 PREPARING TO ENTER PORT

8.1 General

Liaison with Port Authorities

Vessels must comply with advance notice of arrival requirements when applicable. The information required by the port authorities varies from port to port therefore the Master must be familiar with the current port information requirements.

☞ 🕮	Port Information Booklet

The Master must ensure that the information required by the port authority is available to prevent delays in loading or discharging.

☞ 🕮	SMS – Bridge Practices Manual Bridge Procedures Guide

☞ ✓	SMS – Operational Checklists & Forms Manual – Preparing to Enter Port (Bridge) Checklist SMS – Operational Checklists & Forms Manual – Preparing to Enter Port (Engineering) Checklist

Mooring Equipment

Before arrival, all the necessary mooring equipment is to be made ready, and deficiencies or incompatibilities which could affect safe mooring are to be reported to the Master.

Even if the ship is mooring, the anchors should be made ready in case of emergency.

The Chief Mate must ensure sufficient personnel are available to assist with mooring operations.

Engineering Department

The Chief Engineer must ensure:

- ❍ The Engine Department is at standby.
- ❍ The main engine is ready for maneuvering.
- ❍ Bow Thruster is on-line and ready for use.
- ❍ Main and standby generators on-line and sharing load.

☞ ✓	SMS – Operational Checklists & Forms Manual – Preparing to Enter Port (Engineering) Checklist

An additional licensed engineer, normally the Chief Engineer or 1st Assistant Engineer, must be on duty in the Engine Room during maneuvering and harbor stations.

8.2 Equipment Testing

CAUTION **Before carrying out any tests that involve the ship's engines, permission must be obtained from the Engineer on Watch.**

Before entering port or restricted waters, ensure the following equipment is operating properly:

- Main propulsion and controls.
- Control alarms.
- Steering gear.
- Navigation and communications equipment.
- Internal communications equipment.
- Generators.
- Mooring and anchoring equipment.

A bridge main propulsion control loss drill will be held weekly. During this drill a docking, or departure at the discretion of the Master, will be conducted on Engine Room control. The drill will be logged in the Bridge Log Book and detailed in the Master's Weekly Report.

When the vessel is in maneuvering status and the Engine Room is on Standby, any bell other than full-ahead is to be considered an emergency and the Engine Room will take control and answer the bell.

☞ ✓	SMS – Operational Checklists & Forms Manual – Preparing to Enter Port (Bridge) Checklist SMS – Operational Checklists & Forms Manual – Preparing to Enter Port (Engineering) Checklist

8.3 Pollution

Atmospheric

To avoid pollution of the atmosphere, the emission of smoke from the ship's funnel must be kept to the absolute minimum. All diesel engines are to have their fuel injectors properly adjusted to avoid excessive smoke emission.

The boiler fuel/air ratio controls must be monitored regularly to prevent excessive smoke. The Chief Engineer is to ensure that all boilers are soot blown prior to entering port.

☞ 🕮	Part 5 of this Manual Manufacturers' Instruction Books / Manuals

Sewage

To avoid pollution from sewage while the ship is in port, check the sewage treatment system for correct operation prior to arrival in port.

☞ 🕮	MARPOL AMHS's Waste Management Plan Manual

Garbage

Shipboard garbage should be disposed of through a shore facility.

☞ 🕮	AMHS's Waste Management Plan Manual Port Information Booklet

Oil

Oily mixtures must not be discharged overboard. If reception facilities are required the request discharge is to be in accordance with the AMHS Waste Management Plan.

☞ 🕮	AMHS's Waste Management Plan Manual Part 5 of this Manual

The bilge overboard discharges must be secured and sealed in the closed position before entering port. Record the fact in the appropriate Log.

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